AirLink COMMUNICATIONS

Windows Dial Up Networking (DUN) for AirLink Modems

Application Note - How To

Dial-up Networking (DUN) allows a computer or other device to use your AirLink modem to connect to the Internet or private network using PPP just like an analog modem using a standard phone line.

Note: The Setup Wizard is the preferred method to install a modem driver and configure PPP for your modem. Use the instructions here only if you do not have the Setup Wizard available. iDEN and most GPRS or EDGE modems do not use a Setup Wizard for activation.

Using the Setup Wizard, if do not need to activate your modem, you can select just Setup a DUN Connection from the opening menu to install the driver and set up DUN. Follow the instructions in the Quick Start Guide to install DUN with the Setup Wizard.

Microsoft Windows XP is used in the examples below. The modem driver installation and DUN setup and configuration is similar in Microsoft Windows 2000. Examples are not provided here for installing the driver or configuring DUN for any other operating system.

Caution: To install any driver on your computer, you may need to be logged in as Administrator or have Administrator privileges for your login.

Installing the Modem Driver in Microsoft Windows

Standard installations of Microsoft Windows XP and 2000 include a generic modem driver which will work with your AirLink modem.

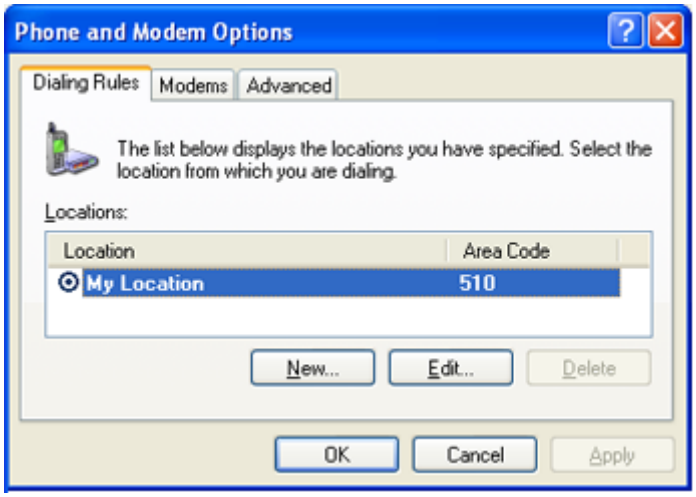
1. Connect the modem.

   a. Connect the modem to the computer with the DB-9 cable.
   b. Plug in the AC adapter, connect the antenna(s) and power on the modem.

2. Install the driver.

   a. Select **Start > Control Panel > Phone and Modem Options** (in Classic View).

FIGURE 1. Phone and Modem Options



b.In the Phone And Modem Options dialog box. Select the **Modems** tab. Select **Add**.

FIGURE 2. Modems

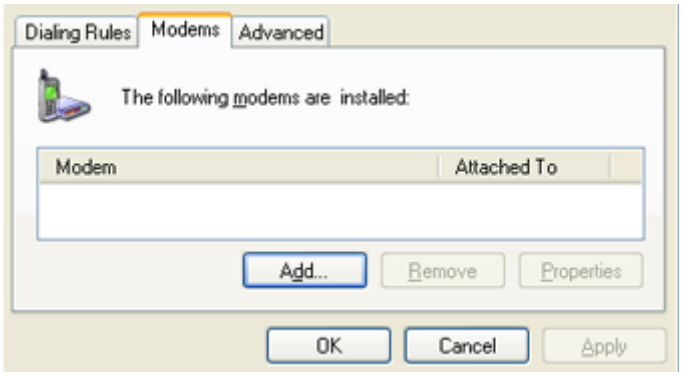
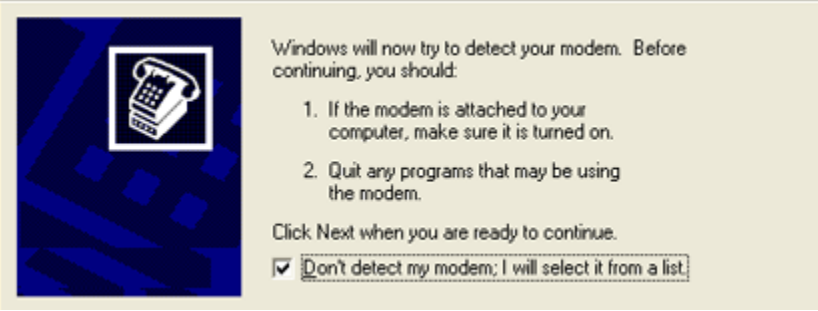


FIGURE 3. Install New Modem

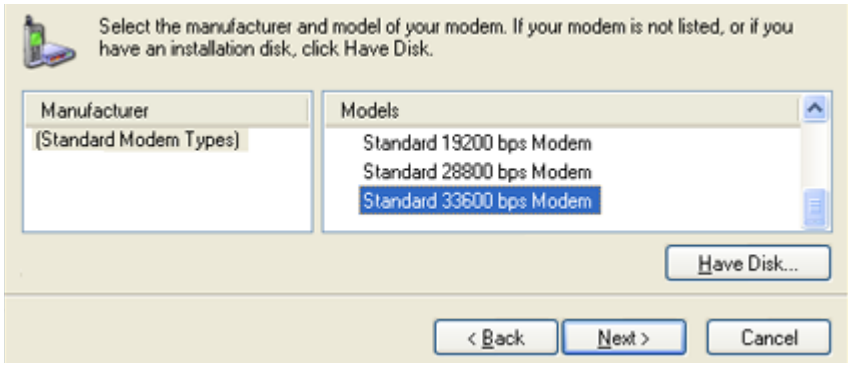

Windows will now try to detect your modem. Before continuing, you should:
1. If the modem is attached to your computer, make sure it is turned on.
2. Quit any programs that may be using the modem.
Click Next when you are ready to continue.
Don't detect my modem; I will select it from a list.

c. Check **Don't detect my modem; I will select it from a list** and select **Next**.

d. Select **(Standard Modem Types)** from the Manufacturers column, select **Standard 33600 bps Modem** from the Models column, and select **Next**.

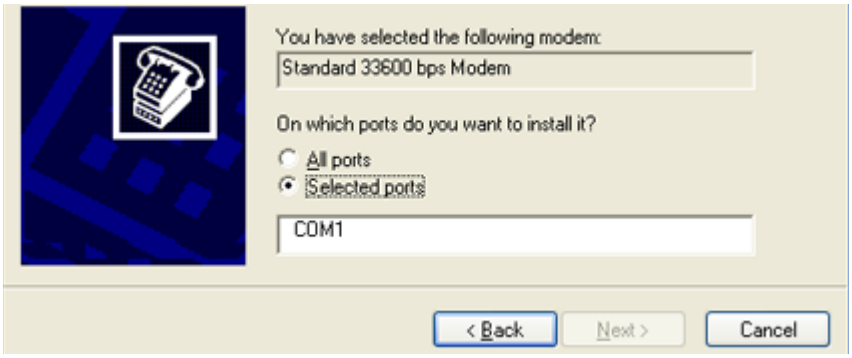
Note: If you have the speed for your modem configured as something other than the default, use the Standard Modem that matches the speed you configured.

FIGURE 4. Modem Driver


Select the manufacturer and model of your modem. If your modem is not listed, or if you have an installation disk, click Have Disk.
Manufacturer
(Standard Modem Types)
Models
Standard 19200 bps Modem
Standard 28800 bps Modem
Standard 33600 bps Modem
Have Disk...
< Back
Next >
Cancel

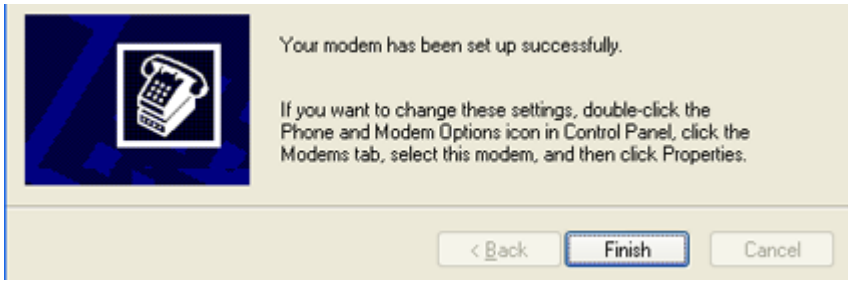
e. Check **Selected Ports**, select the COM port the modem is connected to (commonly COM1), and select **Next**.

FIGURE 5. Modem Port



f. Once the modem driver is installed, select **Finish**.

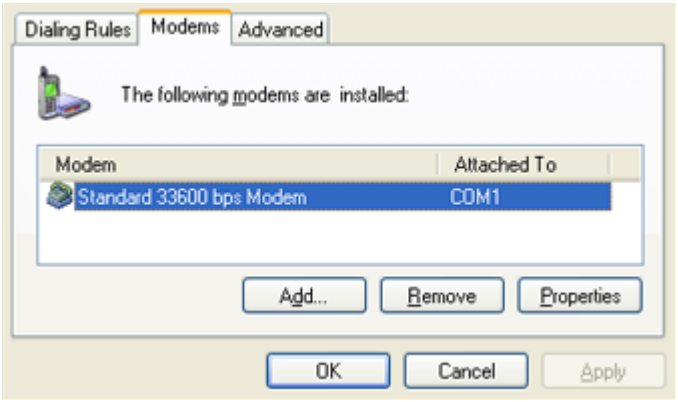
FIGURE 6. Finish


Your modem has been set up successfully.
If you want to change these settings, double-click the Phone and Modem Options icon in Control Panel, click the Modems tab, select this modem, and then click Properties.
< Back
Finish
Cancel

3. Configure the driver.

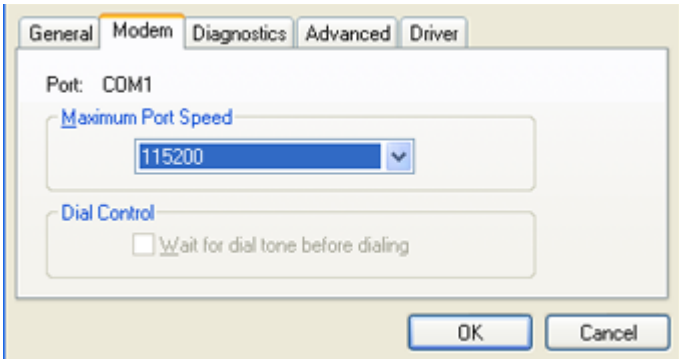
a. When you return to the Phone and Modem Options window, you should see the newly installed modem "attached to" the correct COM port. Highlight the modem and select **Properties**.

FIGURE 7. Modems



b. Select the **Modem** tab. **Maximum Port Speed** should be set to **115200** (default). Select **OK** to exit.

FIGURE 8. Setting Maximum Port Speed Maximum Port Speed



c. Select **OK** again to exit out of the Phone and Modem Options.

Dial-Up Networking (PPP) Configuration for Microsoft Windows

Once you have a driver for the modem installed on your computer, you can set up and configure Dial Up Networking (DUN) to use the modem as your connection to the Internet using PPP.

Before you start, you will need:

- Administrator privileges to the computer you are configuring or access granted by an administrator on the network to add/remove devices to your computer. (Not necessary on Windows 98/ME.)
- A wireless user account, password, and access number (obtained from your wireless service provider). *May not be required.*
- Windows COM Port and modem set up for a Standard 33600 Modem (see previous section).
- No other program running on your computer that is using the same COM port (serial port) configured for your modem.

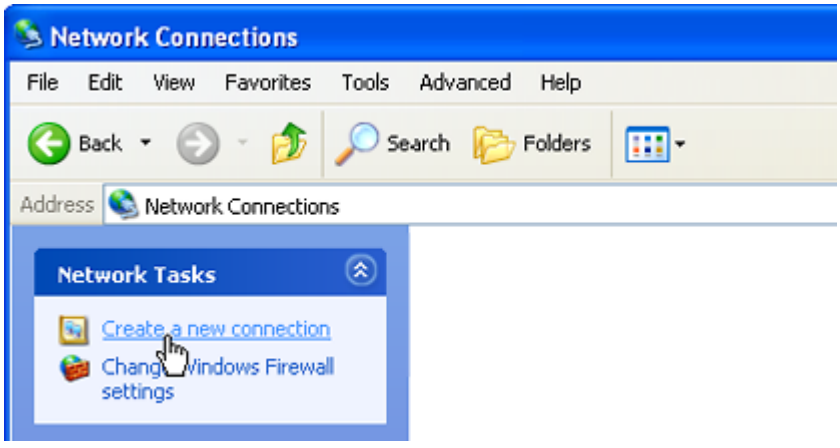
Caution: If you have an existing LAN connection, installing DUN for the modem may interfere with the LAN connection. It's recommended to disconnect your LAN connection before using a PPP connection with your AirLink modem.

Once the DUN connection is initiated, by default, it will take over as the "default route" for network communication and specifically for Internet access. If you want the two connections to co-exist, you will need to de-select "Use default gateway on remote network" (described later) and use the route command in Windows to setup routing through the modem properly. This guide does not provide information on the route command. You may need to consult with your network administrator to properly configure routing.

1. Create a new network connection.

a. Select **Start > Connect > To Show All Connections** to open the **Network Connections** window.

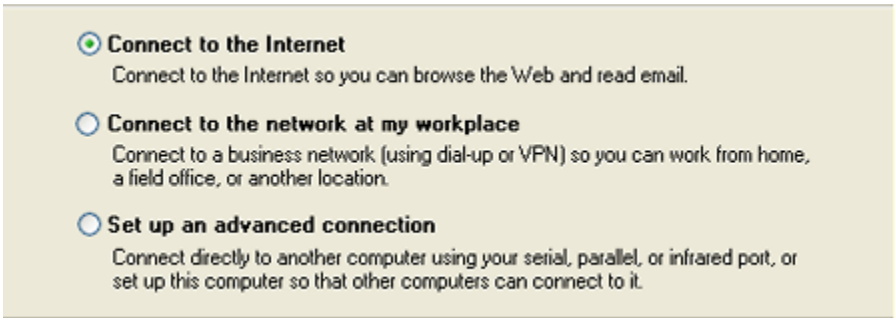
FIGURE 9. Network Connections



b. Select **Create a New Connection** under ***Network Tasks*** in the menu area on the left. Select **Next** to start installing and configuring the DUN connection.

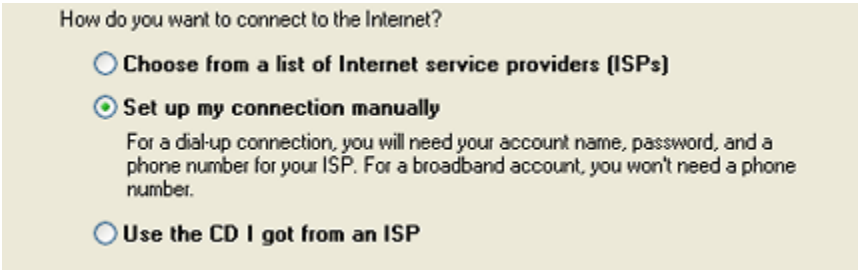
c. Select **Connect to the Internet** and then select **Next**.

FIGURE 10. Connection Type


Connect to the Internet
Connect to the Internet so you can browse the Web and read email.
Connect to the network at my workplace
Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.
Set up an advanced connection
Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.

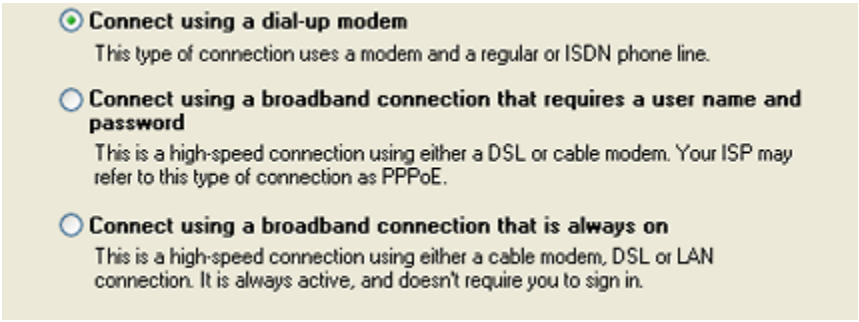
d. Select **Set up my connection manually** and then select **Next**.

FIGURE 11. Preparing the Internet Connection


How do you want to connect to the Internet?
Choose from a list of Internet service providers (ISPs)
Set up my connection manually
For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.
Use the CD I got from an ISP

e. Select **Connect using a dial-up modem** and select **Next**.

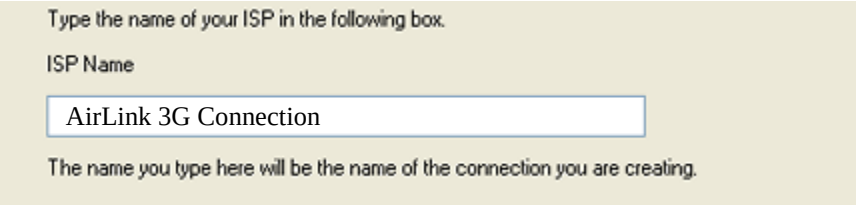
FIGURE 12. Internet Connection


Connect using a dial-up modem
This type of connection uses a modem and a regular or ISDN phone line.
Connect using a broadband connection that requires a user name and password
This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection as PPPoE.
Connect using a broadband connection that is always on
This is a high-speed connection using either a cable modem, DSL or LAN connection. It is always active, and doesn't require you to sign in.

f. Type in a name for the connection, such as **AirLink 3G Connection**. Select **Next**.

The name provided here will not effect the connection in any way. It is only a label for the icon. It can be the name of your wireless service provider, your modem, or any other designation for the connection.

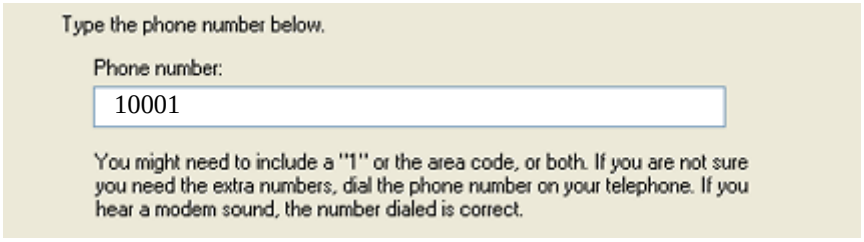
FIGURE 13. Connection Name


Type the name of your ISP in the following box.
ISP Name
AirLink 3G Connection
The name you type here will be the name of the connection you are creating.

Optional: If you have multiple modems installed on your computer, you may be prompted to select the modem to be used. Check **Standard 33600 bps Modem** and select **Next**. If you only have one modem installed, this option will be omitted.

g. Type in **#777 (Redwing)** or **10001 (all others)** as the phone number for the modem to dial and select **Next**.

FIGURE 14. Phone Number


Type the phone number below.
Phone number:
10001
You might need to include a "1" or the area code, or both. If you are not sure you need the extra numbers, dial the phone number on your telephone. If you hear a modem sound, the number dialed is correct.

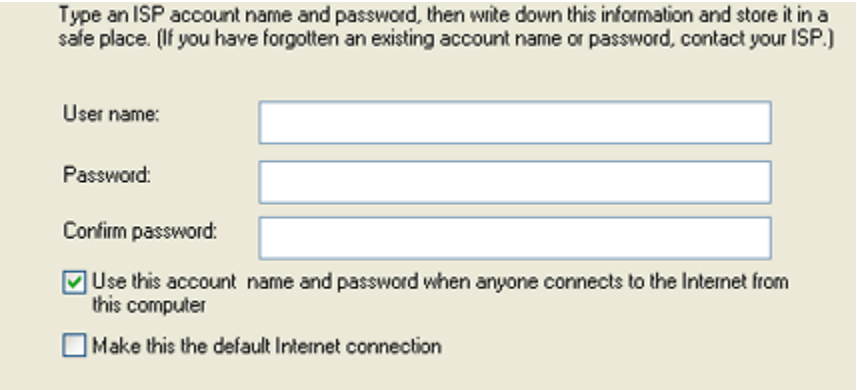
Optional: If you have multiple users configured for your computer, you may be prompted for *Connection Availability.* If you select **My use only**, the account currently logged on will be the only one able to use this DUN connection.

h. Generally the modem takes care of the Account Information (User name and Password) for the connection, so you can leave these fields blank (unless otherwise instructed by Support). If you want to allow others to use the same login for the modem, select **Use this account name and password...** Select **Next** to continue.

Caution: If you have a LAN connection to the Internet and select **Make this the default Internet Connection for the DUN configuration**, you will not be able to use the LAN to connect to the Internet and may also affect the network connection on your computer to the rest of the LAN. Select this option ONLY if the modem will be your sole network connection.

Note: For the Redwing, it is often necessary to enter the User name and Password.

FIGURE 15. Account Information


Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)
User name:
Password:
Confirm password:
Use this account name and password when anyone connects to the Internet from this computer
Make this the default Internet connection

i. If you want to add a shortcut for this DUN connection to your desktop, check **Add a shortcut...** Select **Finish** to exit the ***Network Connection Wizard***.

FIGURE 16. Finish

New Connection Wizard
Completing the New Connection Wizard
You have successfully completed the steps needed to create the following connection:
Airlink Modem
• Share with all users of this computer
• Use the same user name & password for everyone
The connection will be saved in the Network Connections folder.
Add a shortcut to this connection to my desktop
To create the connection and close this wizard, click Finish.
< Back
Finish
Cancel

2. Configure the connection.

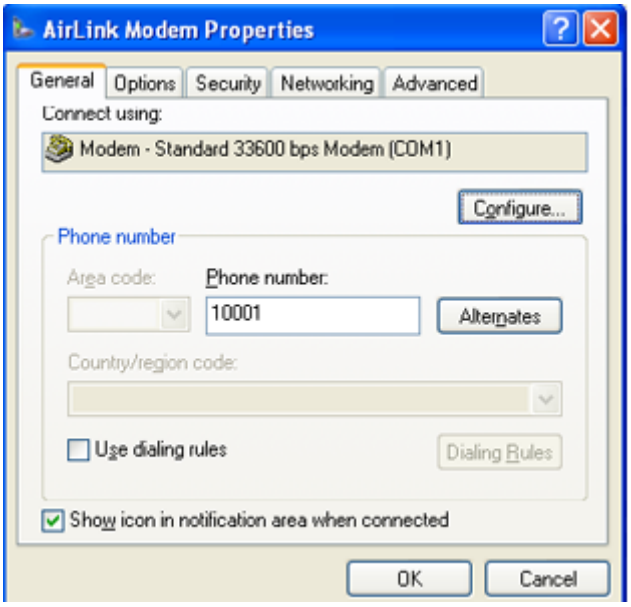
After you complete the New Connection Wizard, there are a few more things you will want to configure in the connection.

a. When the ***Connect*** window opens, select **Properties**.

FIGURE 17. Connect

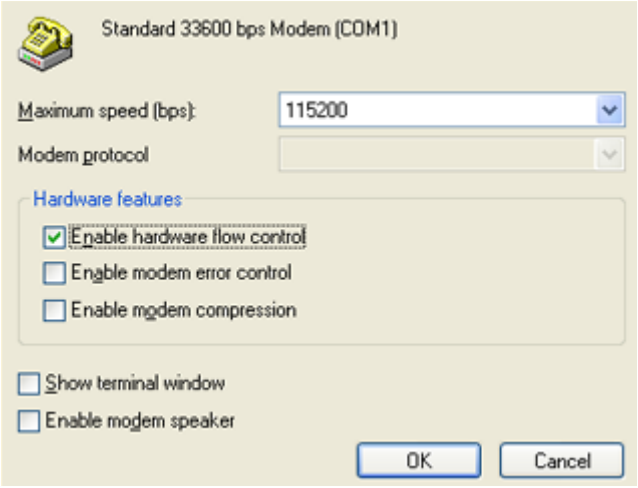
b. Uncheck **Use dialing rules**. Select **Configure**, below the ***Connect using*** line.

FIGURE 18. Modem Properties



c. Select **115200** as the ***Maximum speed***. Check **Enable hardware flow control**. Do not check any other option. Select **OK**.

FIGURE 19. Modem Configuration

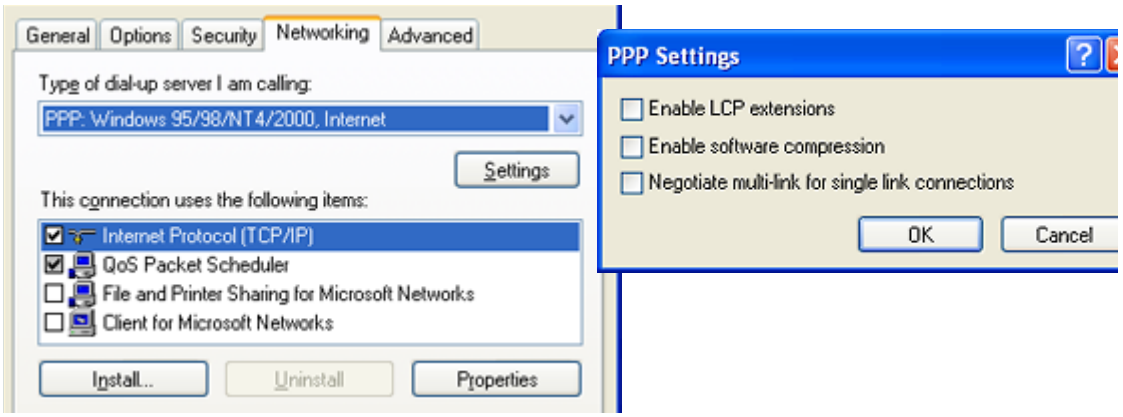


Optional: You may want to check the **Options** tab and change the settings for applications you might be using. The default options are generally applicable for most uses.

d. Unless specifically directed to do so by Support or your network administrator, you do not need to make any changes to the options on the **Security** tab.

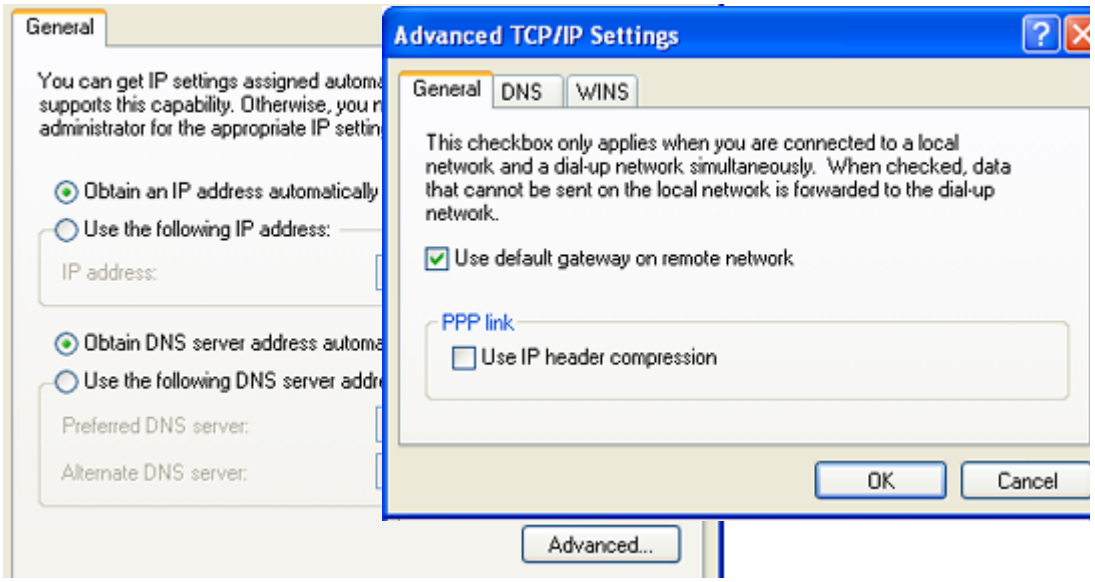
e. Select **Network**. Select **Settings**. Remove the checks from all three PPP settings. Select **OK**.

FIGURE 20. Connection Properties - PPP Settings



f. Select (highlight) **Internet Protocol (TCP/IP)** and then select **Properties**. For most configurations, you will be obtaining the IP address and the DNS server address automatically. Select **Advanced**. Uncheck **Use IP header compression**. Check **Use default gateway...** Select **OK**.

FIGURE 21. Internet Protocol


General
You can get IP settings assigned automa
supports this capability. Otherwise, you n
administrator for the appropriate IP settin
Obtain an IP address automatically
Use the following IP address:
IP address:
Obtain DNS server address automa
Use the following DNS server addr
Preferred DNS server:
Alternate DNS server:
Advanced...
Advanced TCP/IP Settings
General
DNS
WINS
This checkbox only applies when you are connected to a local network and a dial-up network simultaneously. When checked, data that cannot be sent on the local network is forwarded to the dial-up network.
Use default gateway on remote network
PPP link
Use IP header compression
OK
Cancel

g. Select **OK** and **OK** again to return to the ***Connect*** window.

Making a DUN Connection

Establishing a DUN Connection using AceView *(PinPoint and Raven modems only)*

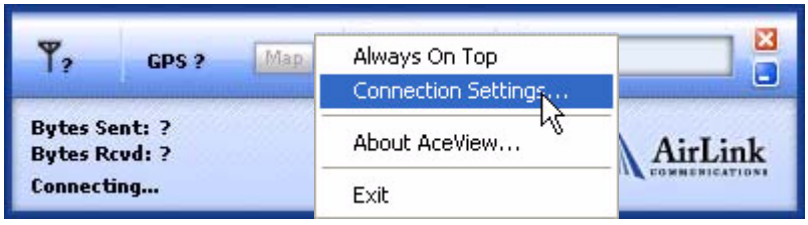
This guide assumes you have a default installation of AceView.

Caution: You cannot use AceView to connect to a Redwing modem.

1. Start AceView.
   Start > All Programs > AirLink Communications > AceView

2. Right-click on the AceView window to open the menu and select **Connection Settings**.

FIGURE 22. AceView: Menu



a. Select **Auto Start** in the DUN section.

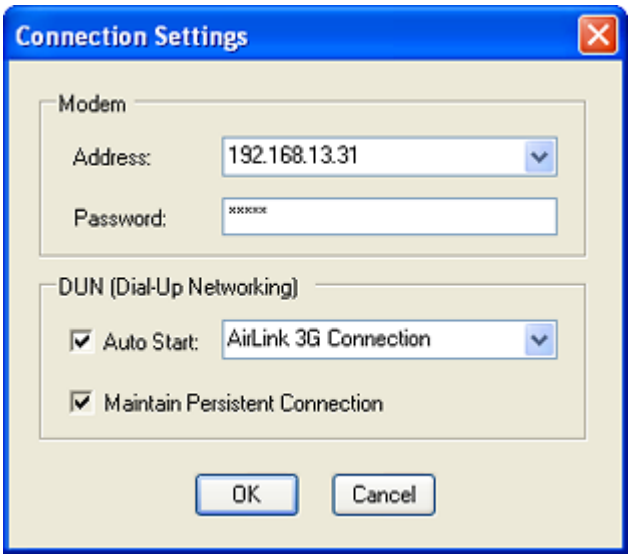
b. Select the DUN connection you have already installed on your computer from the drop down menu once you select Auto Start (you may only have 1 selection which would be preselected for you).

Note: When using the DUN connection, make sure the IP Address is set to the local IP address of the modem.

c. Select **Maintain Persistent Connection:** When checked, AceView will continually check the DUN connection to ensure it is not down. If so, AceView will attempt to connect again.

d. Click **OK**.

FIGURE 23. AceView: Connection Settings



AceView's window will show the dynamically updated status of your connection to your wireless service provider as well the status of the connection between your computer and your AirLink modem. .

Windows 98 and Windows NT

The direct DUN connection features of AceView are not available in Windows 98 or Windows NT.

Establishing a DUN Connection with Windows Networking

1. Start the DUN session.

   Start > Connect To > AirLink 3G Connection (or whatever you named the connection).

FIGURE 24. MS Windows XP: Connect

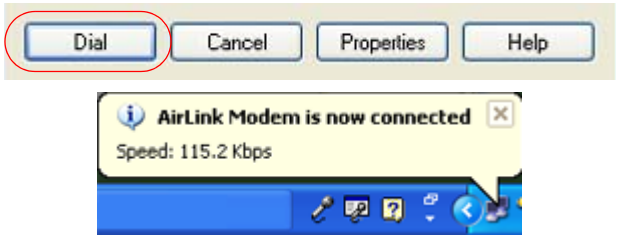
For some accounts, you need to enter the **User name** and **Password** provided by your wireless service provider for the cellular account.

You can also enter these parameters beforehand using ***NETUID** and ***NETPW** (refer to the AT Commands in your modem's User Guide).

2. Connect to the network.

Select **Dial** to connect to the modem and the cellular network. When you're connected, an icon should appear in the system tray showing the connection status.

FIGURE 25. MS Windows XP: Connect



Note: The speed shown in the connection is the speed between the modem and your computer, it is not the speed of the modem's connection to the Carrier or the Internet.

AirLink Technical Support

If you encounter problems with operation of your RJ-11 IP Gateway or AirLink modem, AirLink's support staff can help.

Caution: The configuration suggestions offered in this guide are not supported nor is any equipment other than AirLink products. Only the operation of the modem or software obtained directly from AirLink is supported.
Refer to the User Guide for your modem or the AirLink website for AirLink product warranties.

AirLink Support Web Site

The AirLink web site is updated frequently with Setup Wizards, Utilities, How-To Guides, and other documentation: http://www.airlink.com/support.

AirLink Documentation and Guides

- **Modem User Guides** - These guides are specific to your modem type, cellular provider, and cellular technology and contain comprehensive information about the operation of the modem and its features.
- **Modem Quick Start guides** - These guides are also specific to the modem type, cellular provider, and cellular technology and are a step by step guide to activating the modem using the Setup Wizard or other steps as applicable.
- **Utility Guides** - These guides focus on the features of one of the AirLink modem utilities: Wireless Ace, AceView, AceNet, Modem Doctor, etc.
- **Application Notes** and **How-To Guides** - These guides detail configuring the modem to work with a specific feature set or how the modem can be set up to work with a specific 3rd party (non-AirLink) device.
- **Data Sheets** and **White Papers** - These are technology based information documents.

Contacting Technical Support

For support assistance please email support@airlink.com or call 510-781-9760 Monday through Friday 5 AM to 5 PM Pacific Time (8 AM to 8 PM Eastern Time). Support is not available weekends or holidays.

Information in this document is subject to change without notice.
©Copyright AirLink Communications, Inc., 1993-2006. All rights reserved.